

THIRD ANNUAL REPORT  
OF THE  
BOARD OF EDUCATION  
ON THE  
DEPARTMENT OF UNIVERSITY EXTENSION.  
  
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## THIRD ANNUAL REPORT OF THE BOARD OF EDUCATION ON THE DEPARTMENT OF UNIVERSITY EXTENSION.

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The first and second annual reports of this department were brief records of beginnings. The third annual report, based on two years' experience, may be more substantial. It will stress two features: first, a summary of activities and achievements during the year which closed Nov. 30, 1917; second, an analysis of the personal information furnished by students enrolled in State correspondence courses. The summary of activities and achievements will be presented first.

### SUMMARY OF ACTIVITIES AND ACHIEVEMENTS.

**Improvement of Instruction Material.** — When the department was organized courses were prepared on short notice or were purchased, ready made, from institutions outside the State. Neither method assured the perfect adaptation of courses to the needs of Massachusetts people. During the last two years, however, the department has had experience with 7,000 different students. From that experience much useful matter has been gathered.

When courses are revised, not only instructors but also students are drawn upon for ideas. As each student completes a course he is invited to make constructive suggestions for the improvement thereof. Responses to this request are uniformly generous and helpful.

In the improvement of courses the object has been to expand and enrich material already in existence rather than to extend instruction into new areas. The subject-matter of courses is adjusted more closely to determined needs, and an endeavor is made to stimulate independent mental activity on the part of the student.

**Elementary English.** — English courses, as indicated in statistics (see page 26), are in greater demand than others. In

the revision of *Elementary English*, consideration was given to proper length of lessons; to the phases of grammar and composition which had proved most troublesome to students; to the amount of detail with which each topic should be treated; and to the type of exercises which would best stimulate the thinking powers of the student and measure his information on the subject.

**English for Business.** — This course is primarily designed to meet the needs of students who had to leave school during the seventh and eighth grades. These students need English instruction more definitely applied to business practice than is the case of those taking the course in *Elementary English*. Such topics as dictation to stenographers, parliamentary procedure, advertising, and composition of telegrams and reports are treated in such a way as to serve the interests and needs of students who are just entering commercial life.

**Paragraphing and Punctuation** is a modification of *Elementary English*. It is an example of the kind of course discussed more fully on page 9 of this report. It is designed for clerks, stenographers, and others who realize their deficiency in punctuation and desire a brief and definite course on that one subject.

**English for Americans of Foreign Birth.** — It is yet to be proved that the instruction of foreigners in English can be given effectively by correspondence. A student who speaks broken English needs the presence of his instructor. In correspondence work he lacks easy use of the very instrument by which he seeks and receives instruction. What little facility he may acquire rarely compensates for the time and energy spent in study. If students are to be enrolled in such a course at all they should be only those who have fairly ready use of written English. Instruction should be concerned, not mainly with the structure of the language, but with the common, practical uses of written English. To meet this need the department has supplemented its regular course in English for foreigners with a course which stresses such matters as the writing of letters, the making out of bills, filling in blanks and ordering goods in writing.

**Civics for Naturalization.** — Soon after its establishment the department offered a course which was intended to give training in American citizenship. It approached the subject from the standpoint of social welfare. It dealt mainly with the ministrant functions of government. It said much about opportunities found in

America and the institutions which supplied the opportunities, such as schools, public libraries and playgrounds. It stressed public sanitation, fire prevention, police protection and other conserving agencies. It gave little drill, however, on questions likely to be asked by the naturalization examiner. The course was in some demand at first, but could make no headway in class or in correspondence, because aliens found that its subject-matter did not directly meet the questions of the judges and the naturalization examiners.

The new course in *Civics for Naturalization*, therefore, admittedly deals only with the constituent functions of government. Such a course is narrow and technical, but it is definite. Matters of opinion do not enter into it; the learner deals primarily with facts in the organization and the working of government.

Only one requirement for admission to naturalization classes is insisted on, namely, the ability to read intelligently an American newspaper. It is waste of time to admit aliens to classes before they can read English, because a student who cannot read is unable to handle the subject-matter of the course.

Whenever a student completes the course, that fact is certified to the examiner. On the certificate is placed the seal of the department and the student's record in scholarship, and attendance also if he has taken the course in class. This certificate he is to show to the judge and to the examiner as proof that he has taken an officially approved course under the supervision of the State.

The course was first tried out during the summer in a class at Chelsea. Despite the hot weather, outdoor attractions, and night employment, 19 of the original 60 persevered and completed the course. Of the 19, all but 1 passed the naturalization examiner's tests, and will, presumably, be granted their "papers."

The present requirements for naturalization might well be studied. Much may be said in favor of a program of civic education for immigrants, worked out co-operatively by judges, naturalization examiners, social workers and teachers of immigrants. All the parties to such a conference might learn much from one another. At present the program of community civics runs the danger of being unsubstantial and visionary if it is not given balance and body by men of judicial habit of mind, who are concerned mainly with the tried and rooted community convictions and procedures which have been translated into law. On the other

hand, the words "service" and "welfare," though often abused, are written large across the face of modern American life. Social vision is not a synonym for social vagary. Much of the program for social betterment may be used to vitalize the alien's preparation for citizenship.

**Educational Psychology.** — The purpose of this course is not so much to stress the technicalities implied in the title as to provide material for assistance in meeting actual conditions in the school-room. Fundamental principles are emphasized, but concrete application of those principles is the special purpose of the course.

**Retail Salesmanship**, before revision, was entitled *Retail Selling and Store Management*. As the demand for the course comes largely from persons interested in salesmanship, the management features have been kept in the background and training in selling has been emphasized.

The material of instruction has been greatly enriched by changing the character of the problems. In its revised form the course calls for the working out of individual projects rather than the mere compilation of information gathered from books. The principal advantage of a course of this kind lies in its encouragement of salesmen to think about and to study the peculiar features of their work.

**Foods and Nutrition.** — The twelve assignments of this course may be taken as a whole, or they may be divided, and either part of six assignments taken separately. The course is the result of the work of a committee of experts in various phases of the subject, who met and combined their ideas. One of their number was selected to give those ideas organic shape.

The course in *Dietetics* was found to be too technical for busy housekeepers who had neither need nor inclination to study scientific formulas. *Foods and Nutrition* is a course within the comprehension of women whose education stopped between the sixth and tenth grades.

**Household Management.** — This short and intensive course for busy housekeepers was written to be of service both on the farm and in urban communities. General principles are not neglected, but the main emphasis is placed on their practical application. The problems are of the same character as those in the course on *Foods and Nutrition*.

**Practical Applied Mathematics.** — In the rewriting of this



course, methods whereby the student could check his calculations were introduced. Instruction in the use of significant figures was also added. Another version of the course, entitled *Practical Applied Mathematics for Electricians*, is adapted to the daily work of electricians, — an instance of adjusting instruction specifically to the needs of mechanics.

**The Slide Rule and Its Uses** illustrates what the staff of the department believes to be a sound departure in extension teaching, namely, the offering of short intensive courses confined solely to certain useful phases of long general courses. The course on the slide rule is for two classes of students: first, for those in business or in industry who have much to do with computation, but have not had engineering courses in which the slide rule is taught; second, for teachers of mathematics in junior and senior high schools who have to introduce practical features into their teaching. The course is only five lessons long, and limits its instruction to effective manipulation of the rule. Considerable facility in mathematical processes is presupposed.

**Practical Electricity** was rewritten throughout, and improved by the stimulating character of its problems. As in other courses revised during the past year, thinking, rather than mere compilation, is stressed.

**Heating and Lighting for Janitors.** — Last spring this course was supplemented with fresh practical material. At the close of the school year it was recommended to school committeemen and to superintendents as a profitable course for janitors during the summer months. Following this recommendation enrollments in the course increased threefold.

**Plan Reading and Estimating** is a new course in two parts, each of ten lessons. Many persons who have no need of skill in architectural or mechanical drawing do have to read dimensions on blue-prints and to interpret the conventional symbols thereon. There is a like need in estimating the quantities of building materials from the plans and elevations on blue-prints and drawings. This course meets such demands.

**Safety Engineering.** — The subject-matter of this course is contributed by a group of engineers who are experts in different fields. The material has been given organic form by the secretary of the New England branch of the National Safety Council.

The course consists of twelve assignments, and treats the follow-

ing topics: how accidents occur,— their prevalence; principles in design and construction of mechanical guards; hazard in fire, in power generation and transmission; care of injured workmen; sanitation and similar subjects. It will be useful to factory men in general, but especially to superintendents and foremen.

**French for American Soldiers.**— If the war lasts long enough to teach America its constructive lessons, probably no social activity will be more deeply affected than education. Nothing has made this clearer than the endeavors of the department to provide instruction for soldiers in the encampments, particularly instruction in spoken French. Two drawbacks beset the experiment: first, the uncertainty that a group would remain together long enough in one place to make adequate instruction possible; second, the difficulty in finding instructors who could change their classroom habits to suit the type of men taught, and who could condense their subjects into the small compass necessary.

The aim of the department in providing instruction in spoken French was to enable American soldiers to make themselves understood in their French environment. It was recognized to be impossible to impart any niceties of speech in but twenty lessons. It was believed possible, however, to make the men familiar with the more common terms used in camp, and to give them sufficient French grammatical structure to hold the terms together. The department had a course prepared, and established classes at once among sailors and soldiers at places enumerated in the statistical tables on page 29. Wide interest was shown in the idea, though in actual practice not much could be accomplished. The war spirit was in the air. Men were dispatched to new stations over night. No soldier or sailor classes were able to complete the course.

The most successful instruction was not that given according to academic method. The classes that held together best were those taught by teachers who made their living by teaching French outside the schools. There is much that academic teachers of language may learn from these men. Their devices for relieving tedium, their methods of driving home a principle, their short cuts to results may well be studied very seriously for the improvement of language teaching in schools and colleges.



An adaptation of the course in spoken French for soldiers was made for doctors and nurses preparing to serve in France. Classes were formed in co-operation with the Red Cross authorities, who undertook the organization of classes and provided quarters. These classes were more stable than those for soldiers and sailors. Many completed the course. (For statistics, see page 29.)

**Shorter Courses.** — Most of the courses given by the department have contained twenty assignments, or lessons. This number was chosen because it seemed that courses of this length could easily be completed between October and May. Experience and statistics seem to show that courses of twenty assignments are too long from several standpoints. From the standpoint of student mortality, the percentage of those who complete courses of ten assignments appears to be about twice as great as the percentage of those who complete twenty assignment courses. The figures available are not so conclusive as they would be if they represented the results of several years, but they show the expected tendency of students to complete courses of short duration.

From the standpoint of suitability, the short course is preferable to the long course. Extension courses are taken by men and women who are busy earning a livelihood. They become conscious of a definite weakness in their educational equipment and take up extension courses to overcome that weakness. Long general courses become onerous to such persons, especially after they have secured from a course the knowledge they desired. It would, therefore, seem to be a step in the right direction to lift from the general courses certain useful elements and offer them as short courses. By such an arrangement each student may secure what he wants without having to take much that he does not want; he may have the satisfaction of completing a course and is saved the feeling of failure that comes from leaving a task incomplete. In other words, the short course tends to build up a habit of success. Two courses of this character have been arranged, namely, *Paragraphing and Punctuation* and *The Slide Rule and its Uses*. They have already been described above.

**Notifying Employers of their Employees' Completion of Extension Courses.** — Early in 1917 there appeared to be an opportunity for service in notifying employers when any of their

employees successfully completed an extension course in the department. This is done, however, only when agreeable to those most concerned. Since this practice has been adopted the number of messages from students announcing promotions and raises in salary has increased.

**Special Information Service.** — In the Department of University Extension experts in a variety of subjects are employed as instructors. Thus there is available for students a wide range of expert information, in case an arrangement is provided to place it promptly and easily within reach of individuals. Such an arrangement has been provided, and there are indications that, as this service becomes generally known, it will be widely used.

Through its information service the department offers to answer or give expert opinion on any reasonable question that falls within its regular fields of study, namely, mechanics, mathematics, engineering, English, Spanish, French, civics, economics, history, business administration, household economics, education.

**Publications.** — The bulletins of the department, which are regularly published six times a year, have two functions: first, to announce the courses given by class and by correspondence; second, to give permanent and readily usable form to educational material of special significance. The bulletins are issued as pamphlets, and contain from 24 to 48 pages. During the past year six bulletins have been issued as follows:—

1. In January, 1917, the bulletin consisted of the second annual report of the department, which was reprinted from the eightieth report of the Board of Education to give it publicity in economical form.

2. The March bulletin was a compilation of "Educational Extension Opportunities in Massachusetts." In December, 1916, the University Council of Massachusetts requested the department "to issue as one of its bulletins a comprehensive account of all the opportunities in educational extension furnished by various agencies in the State, including those offered by the colleges." In agreement with this request, a condensed statement of extension activities in the State was printed.

3. The May bulletin was the regular annual announcement of courses offered for class instruction only. It was issued in the late spring in order that groups desiring extension classes might make

their plans early and give the department time to secure suitable instructors.

4. In July the department published, both in bulletin form and in separate lesson pamphlets, its course on "Civics for Naturalization." In printing this course the department deviated from its usual procedure of mimeographing material. The reason for the innovation was that eventually all courses which have reached a satisfactory form should, in the opinion of the director, be printed. Lesson sheets printed in large legible type are better fitted for conditions of study among extension students than the usual mimeographed material. This is especially the case in courses in which studying has to be done under bad lighting conditions. For an extended discussion of the educational aspects of civics for naturalization, see pages 4 to 6 of this report.

5. Soon after this country entered the war it became evident that everything possible should be done to enlighten our people on the food question. The public had to be safeguarded from undue panic on the one hand, and easy complacency and consequent waste on the other. In response to this need the department issued its bulletin, "Food Thrift." This not only stressed saving in the preparation of foods, but through the addition of numerous recipes and menus showed how to make the saving. Two editions of this bulletin were published to meet the widespread demand, which still continues. In all, 18,000 copies were printed and distributed.

6. The November bulletin contained the announcement of courses offered for correspondence instruction. It comprised the richest offering thus far issued by the department, as will be seen in the following tabulation, which shows the number of courses described in each of the correspondence instruction bulletins: —

	Courses.
Bulletin No. 1, January, 1916, . . . . .	68
Bulletin No. 2, March, 1916, . . . . .	70
Bulletin No. 5, September, 1916, . . . . .	84
Bulletin No. 12, November, 1917, . . . . .	106

In the case of Bulletin No. 12 the increase is due to the partition of courses into smaller units, as well as to the addition of entirely new subjects.

In addition to the regular printed bulletins the department has issued monthly news-letters to students, which are designed not only to give them a point of view regarding educational opportunities in general, but also to inform them of the current activities of the department.

**Co-operation with Connecticut Valley Colleges.** — When the colleges of the Connecticut Valley joined forces in 1916 to make their facilities available to the people of the valley, the Department of University Extension offered a representative to administer the organization of classes. During October and November the department representative spent a part of each week at Amherst. Five extension classes were formed, — two in Spanish, one in geology, one in zoölogy, one in spoken English. A course of lectures was also given.

This year the people of the valley have been circularized, and to all who have shown interest a special follow-up letter has been sent. At the present writing three classes have been formed, — one in French, another in zoölogy and a third in art. To increase interest in the courses offered by the colleges in the valley the department has engaged a special representative, who will not only circularize the clubs, parent-teachers' associations and granges, but will visit and address them in person.

**Waiting List.** — In the fall of 1916 the number of applications for enrollment became so great that the Board of Education had to establish a waiting list. This fall the same congestion occurred, and the Board of Education again limited enrollments. It did so in the following terms: —

*Voted,* To authorize the Commissioner to direct the Department of University Extension to receive no enrollments in the Correspondence Study Division after Oct. 22, 1917, until further notice.

*Voted,* To authorize the Commissioner to direct the Department of University Extension to limit enrollment in the Class Instruction Division to classes in process of organization on Oct. 15, 1917.

On Nov. 30, 1917, there were 170 on the waiting list for correspondence courses, and, as nearly as can be estimated, 1,200 for class instruction.

**Embarrassment caused by the Present Fiscal Arrangements.** — In the second annual report the ways in which the pres-



ent financial arrangements handicapped the department were explained. It was shown that the period of greatest expansion and activity falls in the late autumn, winter and early spring, and that until the General Court makes an appropriation the department is held down to a rigid monthly rate of expenditure.

In the education of deaf and blind children the above plan is not in use. With the approval of the Board of Education, the Governor is empowered to make provision for the education of all eligibles who apply for it. (See Revised Laws, chapter 39.) In certain aspects vocational education is also unrestricted. (See sections 8, 9 and 10, chapter 471, Acts of 1911.) If similar powers could be given to the Board of Education and the Governor in the case of persons seeking enrollment in State extension courses, the department could accommodate at once all eligibles who applied to it for educational advantages.

**Opportunities in the Department for Pupils who leave High School.** — The entrance of the United States into the war has created profitable openings in industry and trade which lure boys and girls from high school. This condition, presumably, is only temporary, and if opportunities are afforded to keep alive the interest of these pupils they may later be reclaimed. The Commissioner of Education and the director of the department have not failed to see the opportunity of service to these young people. It would be easy to make a canvass of the situation and throw open to those leaving high school opportunities for home study in extension courses. The financial necessity for restricting enrollments, however, has made any movement to this end inadvisable.

**North Adams State Normal School Extension Courses.** — According to the act by which it was established, the Department of University Extension was specifically directed "to supervise the administration of all extension and correspondence courses which are supported in whole or in part by state revenues." In accordance with this provision the director of the department and the principal of the North Adams Normal School have worked out an understanding whereby the act may be obeyed without burdening the department with extra expense and without disturbing the administration of the courses given by the normal school.

Correspondence courses in normal school subjects were first offered to teachers of Massachusetts by the North Adams Normal



School in February, 1911. During the first year, courses were offered in psychology, language, history and geography.

On April 1, 1912, correspondence work was organized as a separate department, and to the four courses already in operation English grammar, literature, arithmetic, and economics were added.

In response to many requests cooking was added to the curriculum during 1912; sewing in 1913; paper construction, raffia work, yarn weaving, and elementary handwork adapted to the first six grades, in 1914. Special courses in woodworking for older pupils were detailed for teachers whose circumstances made such work feasible. The demand for these courses arose from experience with other courses, and they have been pursued with more than usual enthusiasm.

At the present time — November, 1917 — 135 teachers, of whom 129 are in active service, are taking 169 courses by correspondence, — 51 in language, 27 in handwork, 21 in history, 20 in arithmetic, 11 in geography, 11 in psychology, 6 in literature, 5 in sewing, 8 in grammar, 6 in domestic science, 1 in woodwork, 1 in busy-work, and 1 in economics.

The increase in registration has resulted directly from distribution of circulars and personal explanation of courses in teachers' meetings and superintendents' conferences. New registrations from January, 1915, to September, 1917, have been unsought, these resulting directly from recommendations of teachers already registered, or from superintendents who had such teachers in their employ. During September and October, 1917, opportunities for professional study by correspondence were explained to teachers in seven towns and superintendency unions.

The normal extension courses grew from the belief that the professional training of the young teacher should not cease with graduation from the normal school; it should follow her into her teaching, to keep her true to the principles she learned as a normal school student. In her new work the teacher needs the encouraging influence of persons more experienced than herself. Through extension work she can have the vitalizing advice of a friend to whom she can bring her problems.

The extension service of the North Adams Normal School has justified itself as a factor in the training of teachers. Its usefulness

has been especially significant in western Massachusetts, though students have enrolled in other parts of the State. (For details as to enrollments, see page 31.)

**Co-operation of Local School Authorities.** — Examinations under supervision are a feature of department work. To send a representative to a distant part of the State would be expensive. The labor of supervision has been largely taken over by local superintendents of schools and by principals. The work is, of course, entirely voluntary, and is always cheerfully performed.

In a number of instances superintendents have offered the use of certain schoolrooms to correspondence students who have no convenient place for evening study. In addition, students have the privilege of securing help from teachers present.

The department has been made available to high school students when local schools have not deemed it advisable to give certain studies on account of expense. In such instances the local board paid for enrollment in the desired studies, and the students took the work by correspondence. Upon successful completion of the courses the work was counted toward the local school diploma.

**Organization of Classes.** — In the past a great deal of dependence has been placed on interested individuals and groups in the organization of classes. This method, in the main, has worked well. There is, however, danger that, by this mode of class formation, all persons in a community who may like to join cannot be reached. It is suggested, therefore, that the formation of classes spring from a wider local publicity than has previously been thought advisable; that a regular class organizer be sent from headquarters to direct that publicity and to make sure that all in the community who desire extension work are accommodated. It would be the duty of such an organizer to secure the co-operation of local newspapers, schools, civic associations, parent-teachers' associations, libraries, boards of trade, and other organizations. Notices duplicated at the home office could be distributed, and meetings could be held in which the work of the department could be explained in a satisfactory manner. In this fashion classes would be organized as real community activities, and be free from the imputation of exclusiveness.

**Students' Discontinuance in Correspondence Courses.** — Students in extension courses are almost always breadwinners.

Many have families. Many have both night and day work. Study is purely voluntary, there being no compulsory education law governing extension courses, as in the case of day school pupils. Irregularity, therefore, is to be expected. The department has not ignored the problem. During the past year the staff has devoted considerable study to the matter.

Some delinquency is justifiable and unavoidable. Enlistment in military service, illness, removal from the State, resuming work in school or college have been frequent causes of dropping out. The average age and the median age of our students lie between twenty-one and thirty years, the draft age. One hundred and eighty-three of our students have joined the colors and Red Cross work. These students often notify the department not to drop them from the roll, as they want to resume their courses when they come back from the front. The department does not drop them, though it knows that some can never come back.

Another group wish to be released because their course has served its purpose. These are the students who have entered school, college or the civil service. This kind of delinquency is laudable; the department has made possible a step upward; in some instances it has awakened the desire to go back to school while giving the preparation for admission. Fifty students have discontinued courses because of other school work.

Illness is a cause of much irregularity in work and considerable abandonment of courses. Disabled extension students come back much more slowly than do students in the day schools. They have their regular business, which must of course receive first attention. Making up lost time in business is frequently slow work; sometimes it prevents continuance in extension courses altogether. Much has been done to reclaim students who have fallen behind in their study. Many who might drop out are influenced by the personal interest shown in the communications sent them by the director. These resume work and complete their studies.

## ANALYSIS OF DATA FURNISHED BY STUDENTS.

*Purpose.*

The object of this analysis is to reveal the prevailing characteristics of people who enroll in the correspondence courses<sup>1</sup> offered by the department.

The usual method of making studies in education was adopted, and a representative fraction of the student body, the individual units of which were chosen at random, was subjected to inquiry. Twelve hundred cases out of 2,500 were considered. Data for the inquiry were taken from the registration blanks filled in by the student at the time of enrollment. The cases considered were chosen as follows: an efficient clerk, newly employed by the department, and therefore having no preconceptions as to conditions, was directed to tabulate the facts on the first 1,200 correspondence enrollment sheets as they occurred in an alphabetical file. The facts tabulated covered age, sex, place of birth, occupation, course selected, previous education and motives for enrolling. Cases in which the information sought was not complete were disregarded, but as these omissions were made consistently in the order in which they occurred they could not materially affect the result. Minor studies of the personnel in classes revealed slight differences from that in correspondence, but it is considered best to make the study of classes the basis for a separate subsequent report.

The tabulations have been studied and interpreted by a member of the administrative staff. The results of the inquiry are portrayed by means of graphs where possible. Reading matter is introduced only to emphasize points which might otherwise escape the reader.

*Distribution by Sex and Nativity.*

The noticeable feature in Fig. 1 is the disparity between the number of men and the number of women. Studies of other tabulations made from time to time reveal similar percentages. For instance, see page 26 for the grand total of men and women en-

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<sup>1</sup> The reader should remember that students enrolled in correspondence courses as a rule pursue only one course at a time.



rolled in correspondence courses. There, 1,009, or 26 per cent., of the students are women. Other studies reveal similar proportions.

The bars representing the distribution of foreign students show

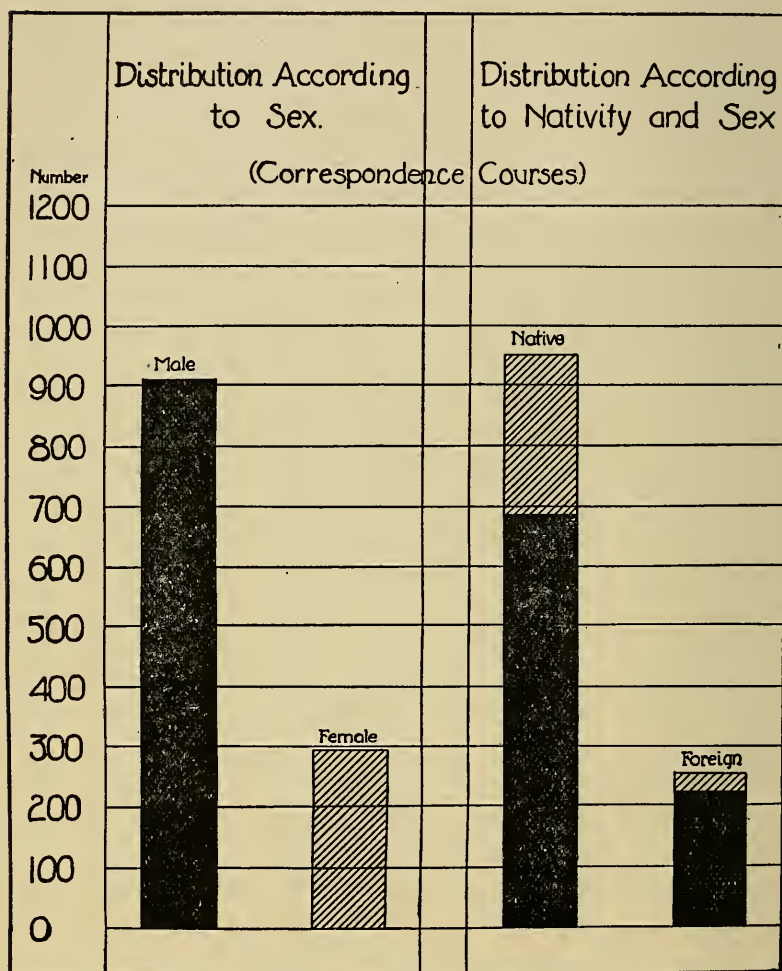


FIG. 1.—Study based on selected group of 1,200 students. Black portions of bars indicate men; hatching indicates women.

that the disparity between the number of native women and the number of foreign-born women, though not surprising to persons familiar with the situation, is striking. The inference to be drawn from the figure is that among foreign-born women interest in



education (however potential it may be) is at present dormant. Foreign-born women form only 2 per cent., while native-born women form 22 $\frac{7}{8}$  per cent., of the 1,200 cases under consideration.

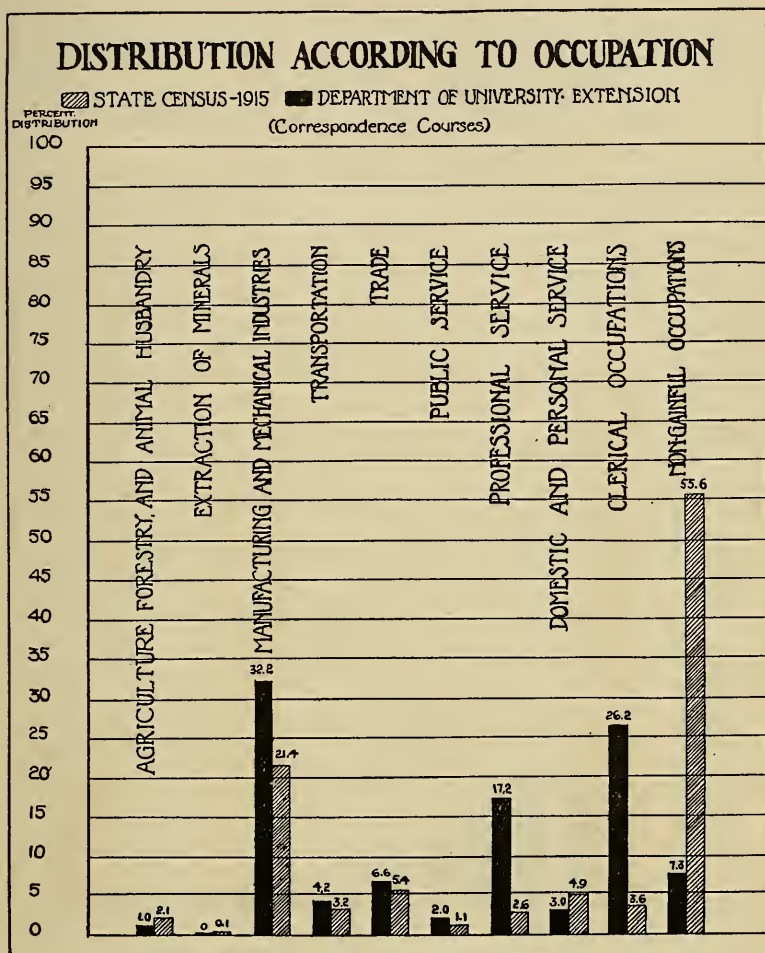


Fig. 2. — Study based on selected group of 1,200 students. Hatching indicates percentage of State population engaged in occupations named; black indicates percentage of students enrolled in correspondence courses who are similarly employed.

#### *Distribution by Occupations.*

In the grouping of occupations under the general descriptive headings, "The Index to Occupations," issued by the Federal Bureau of the Census, was used. As the State statistician em-

ployed the same index in his distribution of the 1915 census returns, both compilations rest on the same basis and are, therefore, comparable. The encouraging feature of this graph is the large

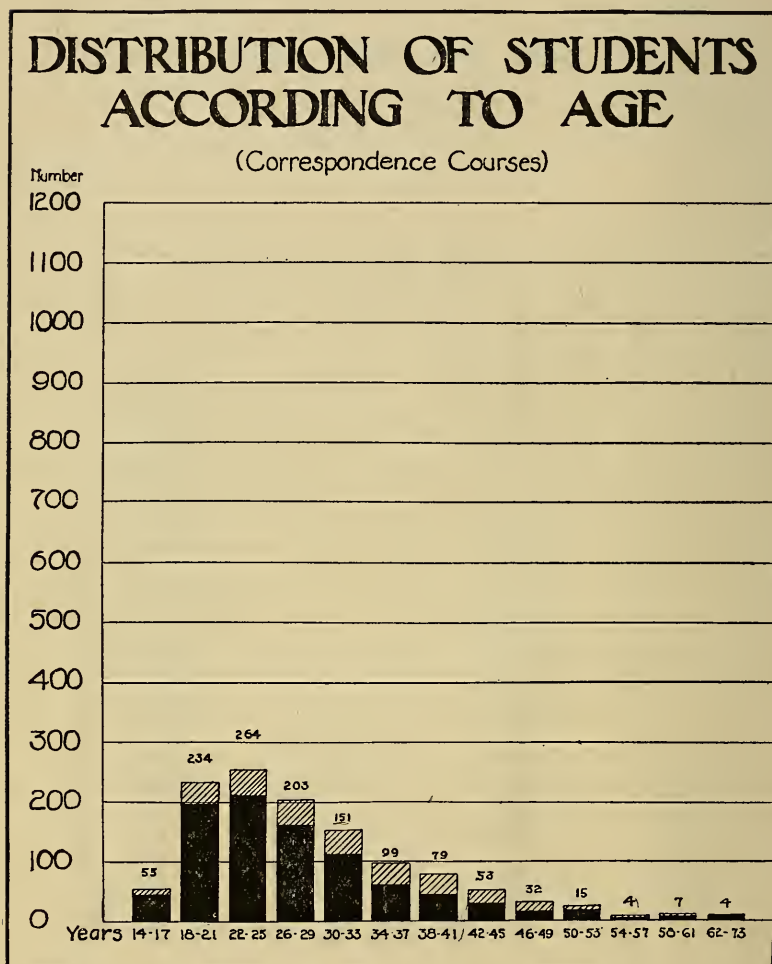


FIG. 3. — Study based on selected group of 1,200 students. Black portions of bars indicate men; hatching indicates women.

percentage of students who come from the industrial and clerical occupations, 32 and 26 per cent., respectively, a grand total of 58 per cent. From this it may be seen that the department, without making any special effort to secure enrollments, is serving those

residents of Massachusetts for whom it was in large measure established.

It should be noted that under "Non-gainful occupations" are listed students, housewives and persons engaged in similar pursuits. Only one person out of 1,200 recorded himself as having no occupation at all. The graph emphasizes the fact that persons enrolled in correspondence courses are mainly wage-earners.

*Distribution According to Age.*

Fig. 3 shows that the greater proportion of students in the department — in this group 911, or 76 per cent. — are beyond school or college age. Of the 55 still of high school age, 41 are employed in gainful occupations and 14 are pupils taking extension courses to supplement their regular school work. Furthermore, those who give their occupation as students are scattering, and are found in all age groups between fourteen and twenty-five. The department, therefore, is not duplicating, to any marked degree, the work of the regular educational institutions. Again, 264, or 22 per cent. of the entire group, are between twenty-two and twenty-five years, the age when men and women are at the beginning of their careers, but beyond the period when they can easily attend school or college. Here, again, it will be seen that the department is serving in a large measure those whose needs were in mind when it was established.

The graph brings out another significant feature. The number of women in each of the groups between eighteen and forty-five years of age is much more constant than the number of men in the same groups. Furthermore, the percentage of women in each group tends to increase with advancing years, while the percentage of men in each group correspondingly decreases. This is the case up to the age of forty-five; after that the curve of percentages becomes uncertain and negligible because the number in each group is so small that the addition of one or two to either sex unduly affects the percentage. The tabulations, therefore, appear to indicate that among women of all ages the demand for correspondence courses is more evenly distributed than among men. Among men, interest and activity in extension work reaches its high point between the ages of twenty-two and twenty-five, but wanes very noticeably after the thirtieth year.

*Correlation between Sex and Courses.*

The correlation between sex and courses is fairly consistent. Men are interested in the practical courses that have a bearing on their work; women, on the other hand, select the cultural studies more frequently than do men. These tendencies are indicated by the italics in the tabulation which follows:—

COURSES.	Men.	Women.
Engineering, . . . . .	149	10
Civil service, . . . . .	77	15
Bookkeeping and business arithmetic, . . . . .	80	19
Accounting, . . . . .	26	3
Stenography and typewriting, . . . . .	7	14
Business organization, . . . . .	35	1
Commercial correspondence, . . . . .	10	1
Applied mathematics, . . . . .	121	—
Unapplied mathematics, . . . . .	57	8
Household economics, . . . . .	3	28
Education, . . . . .	4	5
History, civics, economics, . . . . .	16	11
<i>Elementary English</i> , . . . . .	156	71
<i>Advanced English</i> , . . . . .	24	51
<i>Foreign language</i> , . . . . .	27	41
Drawing (mostly mechanical), . . . . .	120	10
	912	288

Here, though men outnumber women in elementary English in expected proportions, women are more than twice as numerous in the advanced English courses in which cultural aspects and the collegiate method of treatment predominate. The same is true of the foreign language courses. For pure mathematics, however, — algebra, geometry, trigonometry, — which belong to the ancient curriculum of culture, women seemingly show an antipathy. In geometry only one is enrolled.

*Previous Education.*

For a correct understanding of Fig. 4 it is necessary for the reader to know what is meant by the descriptive headings, "elementary,"

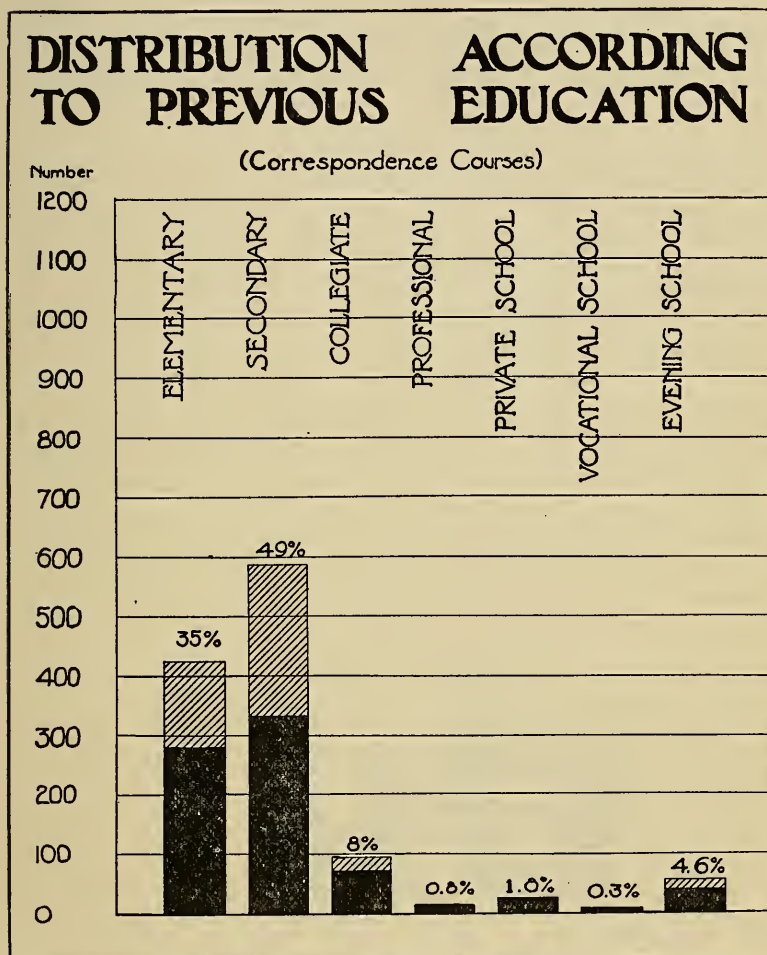


FIG. 4.—Study based on selected group of 1,200 students. Hatching indicates proportion of those who received supplementary education before enrolling in department.

"collegiate" and similar terms. In characterizing their previous education on their registration blanks students were not always definite. Many designated that they attended grammar school



or high school, but failed to indicate at what point they stopped. Thus it is not possible to say how many finished the second grade, how many the fifth, eighth or tenth. It is necessary, therefore,

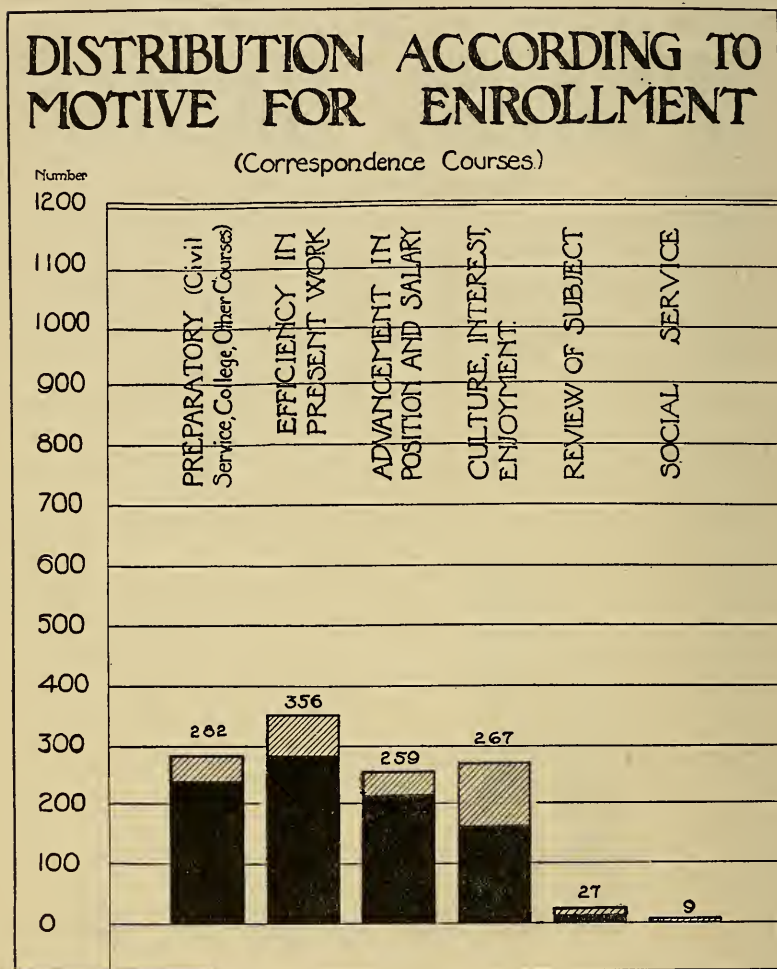


FIG. 5. — Study based on selected group of 1,200 students. Black portions of bars indicate men; hatching indicates women.

to classify a student as having an elementary education if his schooling stopped somewhere in the primary or grammar school years. No doubt many who describe themselves as having a high school education stopped during their first or second year.

The hatched portions of the bars in the diagram represent the number of students who, before enrolling in the department, had already supplemented their early schooling by study in other institutions. This supplementary education included work in the following: Franklin Union, Lowell Institute, textile schools, Massachusetts Nautical School, schools of expression, Y. M. C. A., and business colleges.

One thing in this tabulation stands out clearly, and it should be of interest to all educators — we refer to the apparent awakening influence of high school training. Though high school pupils are presumably better educated than grammar school children, and, therefore, would seem to need less additional training after they leave school, a far greater proportion of them want more education. It cannot be argued that this condition is due solely to the fact that the more education one has the more he wants, for in that case the demand for extension courses among college graduates would be more general. Nor can it be argued that high school instruction is more inspiring than grammar school or college instruction. Is it not safe to infer that, because high school education falls within the period of adolescence, the impetus given in these impressionable years is more lasting and fruitful than when given in earlier or later years?

### *Motives for Taking Courses.*

There are certain features in Fig. 5 which should be noted. By far the greater number (almost exactly 30 per cent.) declared that they took courses for the sake of efficiency in their present positions, — a desire to be better workmen, as against an expressed desire to be better-paid workmen. In 22 per cent. the cultural motive was predominant, greater even than the increase-in-salary motive. The large percentage of women in the culture-interest-enjoyment group is significant. Avowedly altruistic motives actuate less than 1 per cent. of those who enroll.

# STATISTICS OF THE DEPARTMENT OF UNIVERSITY EXTENSION.

The following summary and tables are included in this division:—

- I. Summary of Total Enrollment in Correspondence Courses, in Classes, and in Study Groups.
- II. Table showing Number of Students who have received Instruction by Correspondence in Different Subjects during Last Two Fiscal Years, Dec. 1, 1915, to Nov. 30, 1917.
- III. Table showing Enrollment by Subjects in Classes and Groups, and Location thereof.
- IV. Table showing Number of Students who completed Subjects before Nov. 30, 1917.
- V. Table showing Number of Re-enrollments in Courses.
- VI. Table showing Average Age of Students.
- VII. Table showing Number of Students enrolled in North Adams Normal School Correspondence Courses.
- VIII. (a) Figure showing Geographical Distribution of Enrollments.  
(b) Figure showing Distribution of Costs Dec. 1, 1916, to Nov. 30, 1917.

## I. *Summary of total enrollment of students throughout the Commonwealth according to type of instruction, — correspondence, class, and group.*

[Period covered, Jan. 19, 1916, when first student was enrolled, to Nov. 30, 1917.]

	Men.	Women.	Totals.
Total correspondence enrollment, . . . . .	2,865	1,009	3,874
Total class enrollment, . . . . .	1,662	1,482	3,144
Total group enrollment, . . . . .	73	14	87
Total enrollment, . . . . .	4,600	2,505	7,105

## II. *Number of students who have received instruction by correspondence in groups of subjects during the last two fiscal years.*

GROUPS.	Dec. 1, 1915, to Nov. 30, 1916.	Dec. 1, 1916, to Nov. 30, 1917.	Totals.
Elementary English, . . . . .	439	648	1,087
Advanced English, . . . . .	122	109	231
Commercial correspondence, . . . . .	14	53	67
Foreign languages, . . . . .	160	188	348
Civics, history and economics, . . . . .	30	50	80

II. *Number of students who have received instruction by correspondence in groups of subjects during the last two fiscal years — Concluded.*

GROUPS.	Dec. 1, 1915, to Nov. 30, 1916.	Dec. 1, 1916, to Nov. 30, 1917.	Totals.
Pure mathematics, . . . . .	69	173	242
Drawing, . . . . .	208	340	548
Mechanical subjects, . . . . .	112	197	309
Electrical subjects, . . . . .	31	89	120
Construction, . . . . .	60	128	188
Civil service, . . . . .	135	160	295
Bookkeeping, . . . . .	186	186	372
Accounting, . . . . .	47	104	151
Stenography and typewriting, . . . . .	20	48	68
Applied mathematics, . . . . .	233	288	521
Homemaking, . . . . .	41	142	183
Pedagogy, . . . . .	7	22	29
Business practice, . . . . .	59	91	150
Unclassified because of later addition, . . . . .	1	11	12
Totals, . . . . .	1,974	3,027	5,001

III. *Number of enrollments in extension classes and groups from Dec. 1, 1916, to Nov. 30, 1917, subjects taught, and cities and towns in which the classes or groups were formed.*

*Classes.*

PLACE.	NUMBER IN CLASS.			Subject.
	Men.	Women.	Totals.	
Amesbury, . . . . .	3	18	21	Commercial Spanish.
Belmont, . . . . .	-	29	29	Foods and nutrition.
Boston-Newton, . . . . .	-	36	36	English Composition A.
Boston, . . . . .	-	32	32	Foods and nutrition.
Boston, . . . . .	-	27	27	Foods and nutrition.
Boston (Franklin Union), . . . . .	42	-	42	Lowell Institute preparatory mathematics.
Boston, . . . . .	12	14	26	Civil service.
Brockton, . . . . .	1	21	22	English Composition A.
Brockton, . . . . .	1	19	20	Educational psychology.
Cambridge, . . . . .	-	43	43	Foods and nutrition.
Cambridge, . . . . .	18	-	18	Heating and lighting for janitors.
Chelsea, . . . . .	21	-	21	Civics for naturalization.

III. *Number of enrollments in extension classes and groups from Dec. 1, 1916, to Nov. 30, 1917, subjects taught, and cities and towns in which the classes or groups were formed — Continued.*

*Classes — Concluded.*

PLACE.	NUMBER IN CLASS.			Subject.
	Men.	Women.	Totals.	
Chelsea, . . . . .	20	—	20	Civics for naturalization.
Chelsea, . . . . .	20	—	20	Civics for naturalization.
Fall River, . . . . .	27	8	35	Commercial Spanish.
Fitchburg, . . . . .	20	—	20	Practical applied mathematics.
Framingham, . . . . .	23	6	29	Commercial correspondence.
Framingham, . . . . .	11	20	31	Italian.
Franklin, . . . . .	—	21	21	Commercial Spanish.
Holyoke, . . . . .	15	3	18	Industrial accounting.
Hyde Park, . . . . .	10	—	10	Practical applied mathematics.
Lowell, . . . . .	—	33	33	Foods and nutrition.
Lowell, . . . . .	8	12	20	English Composition A.
Lowell, . . . . .	4	16	20	English Composition AA.
Lowell, . . . . .	—	25	25	Home furnishing and decoration.
Lynn, . . . . .	—	22	22	Foods and nutrition.
Mattapan, . . . . .	6	24	30	Commercial Spanish.
Milton, . . . . .	—	24	24	Foods and nutrition.
Needham, . . . . .	—	20	20	English I.
Newburyport, . . . . .	8	13	21	Commercial Spanish.
Newton, . . . . .	—	26	26	Commercial Spanish.
North Adams, . . . . .	30	1	31	Retail salesmanship.
Pittsfield, . . . . .	69	12	81	Gasoline automobiles.
Pittsfield, . . . . .	20	9	29	Retail salesmanship.
Springfield, . . . . .	—	29	29	English Composition A.
Springfield, . . . . .	—	20	20	English I.
Taunton, . . . . .	38	—	38	Practical applied mathematics.
Watertown, . . . . .	23	—	23	Advanced shop arithmetic.
Westborough, . . . . .	1	19	20	Educational psychology.
Weston, . . . . .	—	38	38	Foods and nutrition.
Winchester, . . . . .	—	18	18	Foods and nutrition.
Worcester, . . . . .	—	28	28	English Composition A.
Worcester, . . . . .	33	—	33	Industrial organization.
Worcester, . . . . .	24	—	24	Practical applied mathematics.
Worcester, . . . . .	20	—	20	Practical applied mathematics.



III. *Number of enrollments in extension classes and groups from Dec. 1, 1916, to Nov. 30, 1917, subjects taught, and cities and towns in which the classes or groups were formed — Continued.*

*Classes for soldiers, sailors, doctors and nurses expecting to serve in France.*<sup>1</sup>

PLACE.	NUMBER IN CLASS.			Subject.
	Men.	Women.	Totals.	
Ayer (Camp Devens), . .	145	—	145	Spoken French.
Boston (Red Cross), . .	2	17	19	Spoken French (advanced).
Boston (Red Cross), . .	14	32	46	Spoken French.
Boston (Red Cross), . .	4	19	23	Spoken French.
Boston (Red Cross), . .	—	28	28	Spoken French.
Boston (Red Cross), . .	—	25	25	Spoken French.
Boston (Red Cross), . .	12	24	36	Spoken French.
Boston (General), . . .	39	27	66	Spoken French.
Bumpkin Island (sailors), .	35	—	35	Spoken French.
Charlestown (marines), .	25	—	25	Spoken French.
Charlestown (sailors), . .	53	—	53	Spoken French.
Charlestown (yeowomen), .	—	43	43	Spoken French.
Charlestown (soldiers), . .	77	—	77	Spoken French.
Commonwealth Pier (sailors),	20	—	20	Spoken French.
Commonwealth Pier (sailors),	20	—	20	Spoken French.
Framingham (soldiers), .	24	—	24	Spoken French.
Lawrence (nurses), . . .	—	23	23	Spoken French.
Newton (soldiers), . . .	15	—	15	Spoken French.
Squantum (aviators), . .	25	—	25	Spoken French.
Squantum (aviators), . .	22	—	22	Spoken French.
West Hingham (sailors), .	29	—	29	Spoken French.
Worcester (officers), . .	66	—	66	Spoken French.
Totals, . . . . .	1,155	924	2,079	

<sup>1</sup> Classes for soldiers and sailors did not complete courses because of movement of forces.

III. *Number of enrollments in extension classes and groups from Dec. 1, 1916, to Nov. 30, 1917, subjects taught, and cities and towns in which the classes or groups were formed — Concluded.*

*Groups.*

PLACE.	NUMBER ENROLLED.			Subject.
	Men.	Women.	Totals.	
Adams, . . . . .	11	—	11	Stenography.
Lynn, . . . . .	—	11	11	Elementary English.
Milford, . . . . .	10	—	10	Elementary English.
Milford, . . . . .	6	—	6	English for New Americans.
Princeton, . . . . .	—	3	3	Foods and nutrition.
Totals, . . . . .	27	14	41	

IV. *Number of students who have completed courses since establishment of department.*

	Men.	Women.	Totals.
Completed with certificates: —			
In correspondence courses, . . . . .	370	123	493
In classes, . . . . .	249	352	601
In groups, . . . . .	9	—	9
Subtotals, . . . . .	628	475	1,103
Completed without certificates: —			
In correspondence courses, . . . . .	59	31	90
In classes, . . . . .	49	88	137
In groups, . . . . .	6	—	6
Subtotals, . . . . .	114	119	233
Grand total, . . . . .	—	—	1,336

V. *Number of students who have re-enrolled in courses since establishment of the department.*

Men, . . . . .	188
Women, . . . . .	59
Total, . . . . .	247

VI. *Average age of students since establishment of the department.*

In correspondence,	.	.	.	.	.	.	.	.	.	.	.	Years.	26.3 <sup>1</sup>
In classes,	.	.	.	.	.	.	.	.	.	.	.		29.7
In groups,	.	.	.	.	.	.	.	.	.	.	.		26.0

VII. *Number of students in North Adams Normal School Correspondence Courses distributed according to school years.<sup>2</sup>*

YEAR.	Number of students.
1911, . . . . .	15
1911-12, . . . . .	39
1912-13, . . . . .	57
1913-14, . . . . .	124
1914-15, . . . . .	132
1915-16, . . . . .	132
1916-17, . . . . .	102
Sept.-Nov., 1917, . . . . .	135

Total registration of different students February, 1911, to Nov. 15, 1917, 359.

<sup>1</sup> Median age of 1,200 correspondence students, 26.7 years.

<sup>2</sup> Many registrations hold over from one year to another.

VIII. (a) *Figure showing geographical distribution of enrollments*

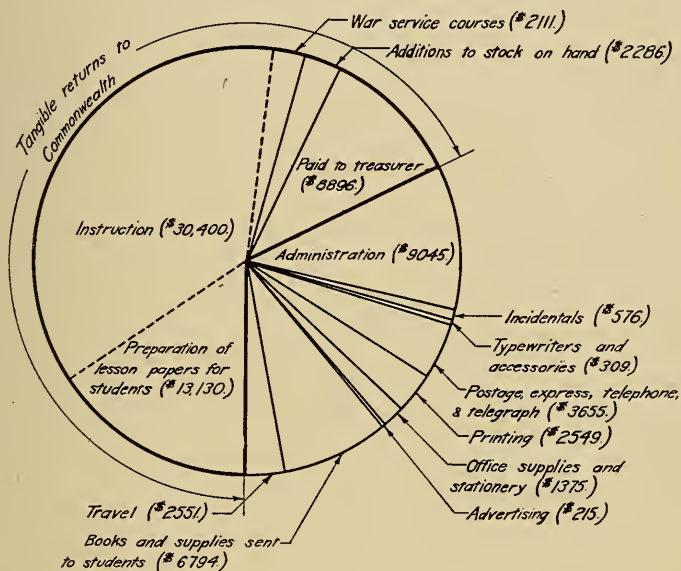
Geographical distribution of all enrollments from Jan. 19, 1915, date of first enrollment, to Nov. 30, 1917.

VIII. (b) Figure showing distribution of costs Dec. 1, 1916, to Nov. 30, 1917.

DEPT. OF UNIVERSITY EXTENSION — MASS. BOARD OF EDUCATION.

CHART OF DEPARTMENTAL EXPENSE.

DEC. 1, 1916 — NOV. 30, 1917



Whole circle represents total expenditures (\$74,996) plus amount paid back to treasurer (\$8,896)



## EXPENDITURES, JULY 1, 1916, TO JULY 1, 1917.

*Salaries.*

## Administration:—

Director, . . . . .	\$5,000 00
Clerks, stenographers, etc., . . . . .	7,591 19
Extra clerical and stenographic service, . . . . .	3,879 58

## Instruction:—

Agents supervising instruction, . . . . .	8,291 68
Full-time instructors, . . . . .	5,543 69
Part-time instructors, . . . . .	14,633 82

*General Expenses.*

Advertising, . . . . .	454 51
Blue prints, . . . . .	49 58
Books, periodicals and clippings, . . . . .	1,126 09
Express, . . . . .	225 24
Material for courses, . . . . .	631 19
Multigraphing machine, . . . . .	323 40
Office supplies, . . . . .	3,071 96
Postage, . . . . .	3,779 37
Printing, . . . . .	2,934 63
Stationery, . . . . .	1,632 58
Sundries, . . . . .	314 94
Telephone and telegraph, . . . . .	41 54
Textbooks, . . . . .	9,297 22
Travel, . . . . .	2,393 91
Typewriters and accessories, . . . . .	417 99
Total, . . . . .	<hr/> \$83,223 89



